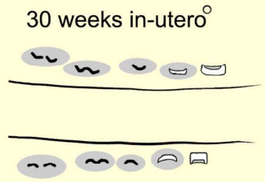
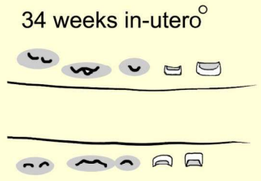
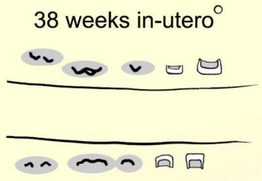
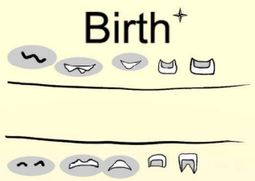
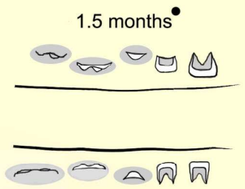
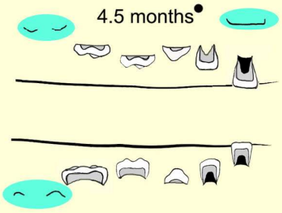


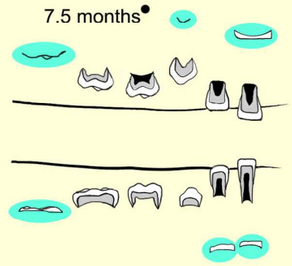


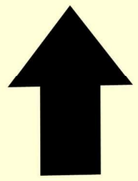


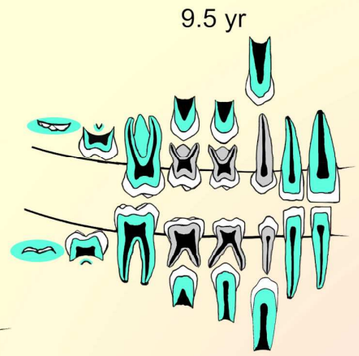


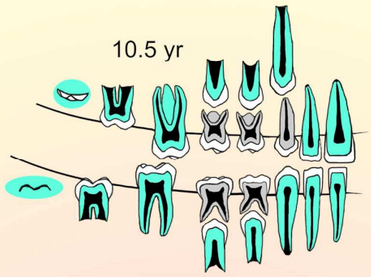


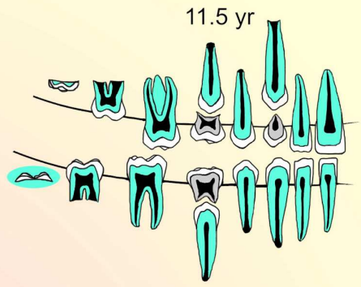


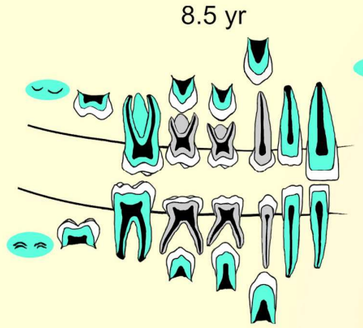


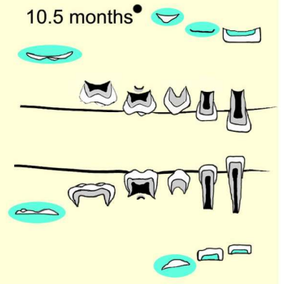








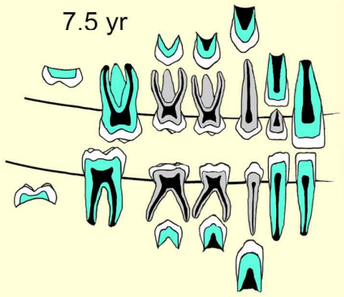


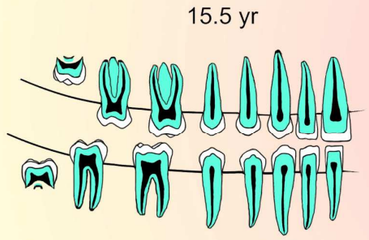


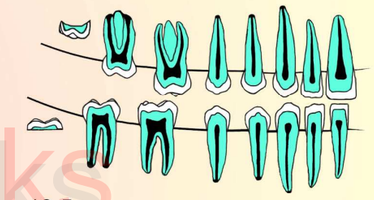
Atlas of Tooth Development and Eruption

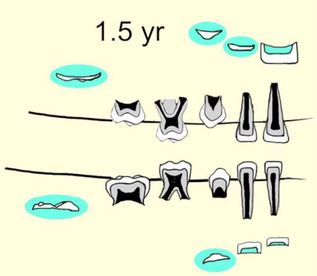
Dr. Sakher J. AlQahtani©

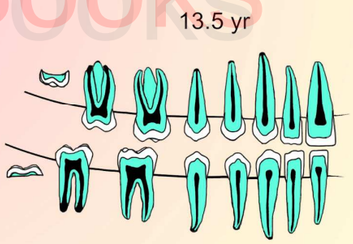
○ midpoint of one month
✦ midpoint of two weeks
• midpoint of 3 months
Thereafter midpoint of each year
Solid lines represent alveolar bone level
Teeth are spaced for clarity

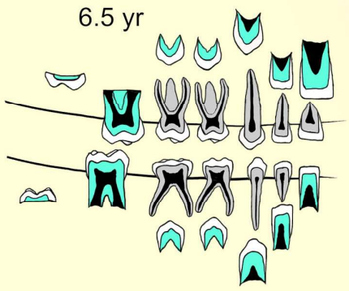


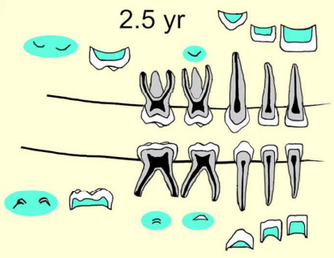


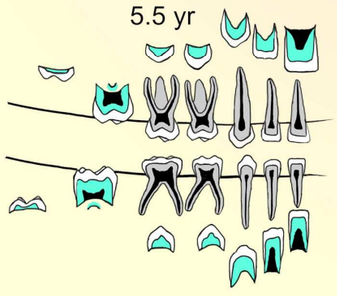


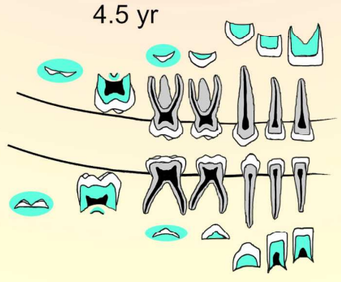


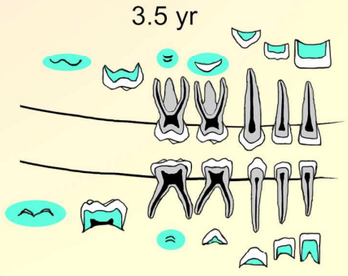




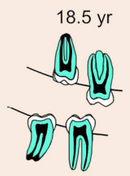


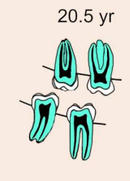






16 - 23 year olds
3rd molar





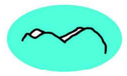
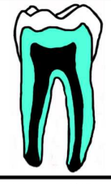
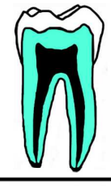
Queen Mary
University of London

The author would like to acknowledge the funding assistance of the Ministry of Higher Education, Saudi Arabia.

Description of Moorrees' stages (1963)
used to identify tooth developmental stages of single rooted teeth

	ci: initial cusp formation			Ri: initial root formation with diverge edges
	Cco: Coalescence of cusps			R 1/4: root length less than crown length
	Coc: Cusp outline complete			R 1/2: root length equals crown length
	Cr 1/2: crown half completed with dentine formation			R 3/4: three quarters of root length developed with diverge ends
	Cr 3/4: crown three quarters completed			Rc: root length completed with parallel ends
	Crc: crown completed with defined pulp roof			A 1/2: apex closed (root ends converge) with wide PDL
				Ac: apex closed with normal PDL width

Description of Moorrees' stages (1963)
used to identify tooth developmental stages of multirooted teeth

	Ci: initial cusp formation			
	Cco: Coalescence of cusps			R 1/4: root length less than crown length with visible bifurcatio area
	Coc: Cusp outline complete			R 1/2: root length equals crown length
	Cr 1/2: crown half completed with dentine formation			R 3/4: three quarters of root length developed with diverge ends
	Cr 3/4: crown three quarters completed			Rc: root length completed with parallel ends
	Crc: crown completed with defined pulp roof			A 1/2: apex closed (root ends converge) with wide PDL
	Ri: initial root formation with diverge edges			Ac: apex closed with normal PDL width

Description of Moorrees' stages (1963)
used to identify root resorbtion
in single and multirooted teeth

	Ac: apex closed with normal PDL width	
	Res 1/4: resorbtion of apical quarter of the root	
	Res 1/2: resorbtion of half the root	
	Res 3/4: resorbtion of three quarters of the root	

Description of modified Bengston's stages
used to identify tooth eruption

	position 1: when the occlusal or incisal surface is covered entirely by bone	
	position 2: when the occlusal or incisal surface breaks through the crest of the alveolar bone	
	position 3: when the occlusal or incisal surface is midway between the alveolar bone and the occlusal plane	
	position 4: occlusal or incisal surface is in the occlusal plane	

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